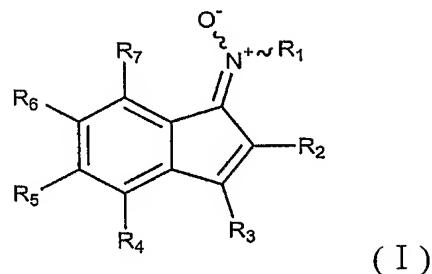


What is claimed is:

1. An indene derivative of formula (I) or a pharmaceutically acceptable salt thereof:

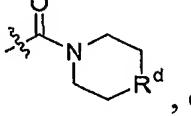
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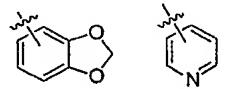


wherein,

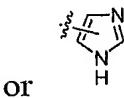
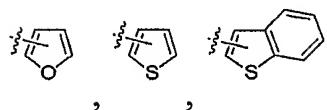
R₁ is C₁₋₆ alkyl, C₁₋₆ alkenyl or C₃₋₆ cycloalkyl, which is unsubstituted or substituted with one or more phenyl groups;

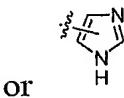
10

R₂ is H, CN, CO₂R^a, CH₂CO₂R^a, CONR^bR^c, , or phenyl;



R₃ is C₁₋₆ alkyl, C₃₋₆ cycloalkyl, or naphthyl, phenyl, , ,



or , which is unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, CN, NH₂, NO₂, OR^a, phenoxy, C₁₋₆ alkyl and C₃₋₆ cycloalkyl; and

15

R₄, R₅, R₆ and R₇ are each independently H, OH, OSO₂CH₃, O(CH₂)_mR^e, CH₂R^f, OCOCH₂OR^g, OCH₂CH₂OR^g or OCH₂CH=CHR^g, or R₅ and R₆ together form OCH₂O;

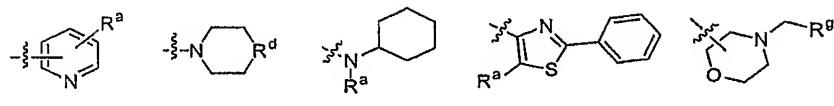
in which R^a is H, or C₁₋₆ alkyl or C₃₋₆ cycloalkyl, which is unsubstituted or substituted with one or more halogens;

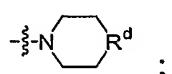
20

R^b and R^c are each independently H, C₁₋₆ alkyl or C₃₋₆ cycloalkyl;

R^d is O, S or NR^a ;

R^e is H, halogen, C_{3-6} cycloalkyl, naphthyl,

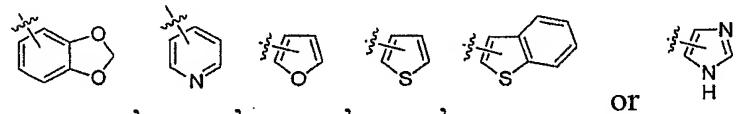
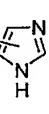

 , , , , , or phenyl, which is unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, CN, NH_2 , NO_2 , OR^a , CF_3 and $COOR^a$;

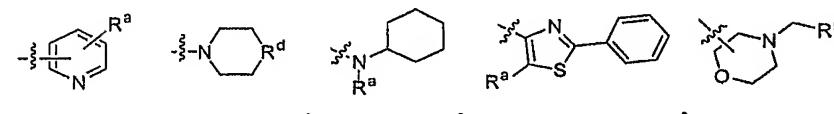
R^f is $OCH_2CH_2R^g$ or ;

R^g is phenyl, which is unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, CN, NH_2 , NO_2 and OR^a ; and

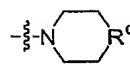
10 m is an integer in the range of 1 to 5.

2. The compound of claim 1, wherein R_1 is C_{1-6} alkyl, which is unsubstituted or substituted with a phenyl group; R_2 is H, CN, CO_2R^a , $CH_2CO_2R^a$, $CONR^bR^c$ or phenyl; R_3 is C_{1-6} alkyl, C_{3-6} cycloalkyl, or phenyl,


 15 or , which is unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, C_{1-6} alkyl and C_{3-6} cycloalkyl; R_4 and R_7 are H; R_5 and R_6 are each independently OH, OSO_2CH_3 , $O(CH_2)_mR^e$, CH_2R^f , $OCOCH_2OR^g$, $OCH_2CH_2OR^g$ or $OCH_2CH=CHR^g$, or together form OCH_2O ; R^a is H, or C_{1-6} alkyl; R^d is O or NCH_3 ; R^e is H, halogen, C_{3-6} cycloalkyl, naphthyl,


 , , , , , or phenyl, which is

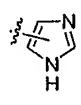
unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, OH, methoxy, CF_3 and $COOR^a$; R^f is $OCH_2CH_2R^g$

or  ; and R^g is phenyl.

3. The compound of claim 2, wherein R₁ is CH₃; R₂ is H, CN, CO₂R^a or

CONR^bR^c; R₃ is C₁₋₆ alkyl, or phenyl,



5 or  , which is unsubstituted or substituted with one or more halogens or C₁₋₆ alkyl groups; and R₅ and R₆ are each independently O(CH₂)_mR^e or CH₂R^f, or together form OCH₂O.

10 4. The compound of claim 1, which is selected from the group consisting of:

- 1) 6-methoxy-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 2) 1-(*trans*-isopropylimino-*N*-oxy)-6-methoxy-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 15 3) 1-(*trans*-benzylimino-*N*-oxy)-6-methoxy-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 4) 1-(*trans*-ethylimino-*N*-oxy)-6-methoxy-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 5) 6-methoxy-1-(*trans*-phenylpropylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 20 6) 6-methoxy-1-(*trans*-(2-methylbutenylimino)-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 7) 1-(*trans*-isobutylimino-*N*-oxy)-6-methoxy-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 25 8) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

- 9) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester
- 10) 1-(*trans*-methylimino-*N*-oxy)-6-phenetyloxy-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 5 11) 3-furan-3-yl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester
- 12) 6-hydroxy-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 13) 1-(*cis*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester
- 10 14) 3-(*trans*-methylimino-*N*-oxy)-1-phenyl-3H-indene-5-ol
- 15) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(5-phenylpentyloxy)-1H-indene-2-carboxylate ethyl ester
- 16) 1-(*cis*-methylimino-*N*-oxy)-3-phenyl-6-(5-phenylpentyloxy)-1H-indene-2-carboxylate ethyl ester
- 15 17) 6-[2-(4-chlorophenoxy)acetoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 18) 6-[2-(4-chlorophenoxy)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 20 19) 1-(*trans*-methylimino-*N*-oxy)-6-(naphthalene-2-ylmethoxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 20) methyl-[3-phenyl-6-(3-phenylpropoxy)indene-1-ylidene]amine-*N*-oxide
- 21) 1-(*trans*-methylimino-*N*-oxy)-6-[2-(5-methyl-2-phenylthiazol-4-yl)ethoxy]-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 25 22) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester
- 23) 6-[2-(4-hydroxyphenyl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 24) 6-(2-adaman-1-ylethoxy)-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester
- 30 25) 6-(2-cyclohexylethoxy)-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-

2-carboxylate ethyl ester

26) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylprophenoxy)-1H-indene-2-carboxylate ethyl ester

27) 6-[2-(2-fluorophenyl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

28) 6-[2-(3-fluorophenyl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

29) 6-[2-(4-fluorophenyl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

10 30) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-[2-(3-trifluoromethylphenyl)ethoxy]-1H-indene-2-carboxylate ethyl ester

31) 6-(4-methoxycarbonylbenzyloxy)-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

32) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl amide

15 33) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

34) 6-[2-(cyclohexylmethylamino)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

20 35) 3-(2-fluorophenyl)-6-methoxy-1-(*trans*-methylimino-*N*-oxy)-1H-indene-2-carboxylate ethyl ester

36) 1-(*trans*-methylimino-*N*-oxy)-6-[2-(4-methylpiperazine-1-yl)ethoxy]-3-phenyl-1H-indene-2-carboxylate ethyl ester

37) (2,3-diphenyl indene-1-yl lidene)methylamine-*N*-oxide

25 38) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate isopropyl amide

39) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate cyclohexyl amide

40) [1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-yl]morpholine-4-yl-methanone

30 41) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-yl-ethoxy)-3-phenyl-1H-

indene-2-carboxylate cyclohexyl amide

42) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-5-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

43) 1-(*trans*-methylimino-*N*-oxy)-6-phenethyloxymethyl-3-phenyl-1H-indene-2-carboxylate ethyl ester

44) (6-methoxy-3-phenylindene-1-ylidene)methylamine-*N*-oxide

45) 1-(*cis*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

46) 6-(2-bromoethoxy)-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

47) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate *tert*-butyl ester

48) 1-(*trans*-methylimino-*N*-oxy)-5,6-methylenedioxy-1-oxo-3-phenyl-1H-indene-2-carboxylate ethyl ester

49) 4-[2-isopropylcarbamoyl-3-(*trans*-methylimino-*N*-oxy)-1-phenyl-3H-indene-5-yl-oxylmethyl]benzoate methyl ester

50) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate isopropyl amide

51) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate cyclopropyl amide

52) 3-(3-fluorophenyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

53) (6-methoxy-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-yl)acetate ethyl ester

54) (6-methoxy-1-(*cis*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-yl)acetate ethyl ester

55) 5-[2-(5-ethylpyridine-2-yl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate isopropyl amide

56) 1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-3-*p*-tolyl-1H-indene-2-carboxylate ethyl ester

57) 1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-3-thiophene-2-yl-1H-

indene-2-carboxylate ethyl ester

58) 3-(4-chlorophenyl)-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

59) 3-(5-chlorothiophene-2-yl)-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

60) 1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-3-*m*-tolyl-1H-indene-2-carboxylate ethyl ester

61) 1-(*trans*-methylimino-*N*-oxy)-3-(4-phenoxyphenyl)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

10 62) 3-benzo-[1,3]-dioxol-5-yl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

63) methyl-[6-(3-phenylpropoxy)-3-pyridine-2-yl-indene-1-ylidene]-amine-*N*-oxide

15 64) 3-furan-2-yl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

65) 3-ethyl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

66) 3-methyl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

20 67) 1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-3-thiophene-3-yl-1H-indene-2-carboxylate ethyl ester

68) 3-cyclopropyl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

69) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-thiophene-3-yl-1H-indene-2-carboxylate ethyl ester

25 70) 3-benzo-[b]-thiophene-3-yl-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

71) 3-(1H-imidazole-4-yl)-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

30 72) 3-(1-ethyl propyl)-1-(*trans*-methylimino-*N*-oxy)-6-(3-phenylpropoxy)-1H-indene-2-carboxylate ethyl ester

73) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carboxylate amide

74) 6-(4-benzylmorpholine-2-ylmethoxy)-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate isopropyl amide

5 75) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(3-phenylpropoxy)-1H-indene-2-carbonitrile

76) 1-(*trans*-methylimino-*N*-oxy)-5,6-methylenedioxy-1-oxo-3-phenyl-1H-phenyl-2-carboxylate isopropyl amide

10 77) 1-(*trans*-methylimino-*N*-oxy)-6-morpholine-4-ylmethyl-3-phenyl-1H-indene-2-carboxylate ethyl ester

78) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(2-pyridine-2-ylethoxy)-1H-indene-2-carboxylate ethyl ester

15 79) 6-[2-(5-ethylpyridine-2-yl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

80) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(2-pyridine-2-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

81) 6-[2-(5-ethylpyridine-2-yl)ethoxy]-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate isopropyl amide

20 82) methyl-[6-(2-morpholine-4-ylethoxy)-3-phenylindene-1-ylidene]amine-*N*-oxide

83) 5,6-bis-methanesulfonyloxy-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

84) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate isobutyl ester

25 85) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate methyl ester

86) 1-(*cis*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate methyl ester

87) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate propyl ester

30 88) 3-(4-fluorophenyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-

ylethoxy)-1H-indene-2-carboxylate ethyl ester

89) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(pyridine-2-ylmethoxy)-1H-indene-2-carboxylate ethyl ester

90) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(pyridine-2-yloxy)-1H-indene-2-carboxylate ethyl ester

5 91) 6-(3-methoxybenzyloxy)-1-(*trans*-methylimino-*N*-oxy)-3-phenyl-1H-indene-2-carboxylate ethyl ester

92) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-thiophene-3-yl-1H-indene-2-carboxylate isopropyl amide

10 93) 3-(1-ethylpropyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-1H-indene-2-carboxylate ethyl ester

94) 3-benzo-[b]-thiophene-3-yl-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

15 95) 3-(4-fluorophenyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

96) 3-(1-ethylpropyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

97) 1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-(2,4,6-trimethylphenyl)-1H-indene-2-carboxylate ethyl ester

20 98) 3-(2,6-dimethylphenyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-1H-indene-2-carboxylate ethyl ester

99) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-5-(2-pyridine-2-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

100) 1-(*trans*-methylimino-*N*-oxy)-5-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate isopropyl amide

25 101) 1-(*cis*-methylimino-*N*-oxy)-6-(2-morpholine-4-ylethoxy)-3-phenyl-1H-indene-2-carboxylate isopropyl ester

102) 3-(3-fluorophenyl)-1-(*trans*-methylimino-*N*-oxy)-6-(2-pyridine-2-ylethoxy)-1H-indene-2-carboxylate isopropyl amide

30 103) 6-[2-(5-ethylpyridine-2-yl)ethoxy]-3-(3-fluorophenyl)-1-(*trans*-methylimino-*N*-oxy)-1H-indene-2-carboxylate isopropyl amide

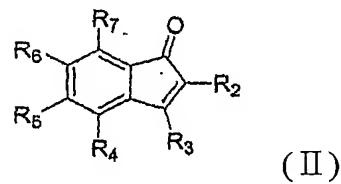
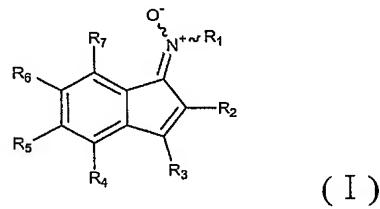
104) 3-(4-cyanophenyl)-6-(2-morpholine-4-ylethoxy)-1-(*trans*-methylimino-*N*-oxy)-1H-indene-2-carboxylate ethyl ester

105) 1-(*trans*-methylimino-*N*-oxy)-3-phenyl-6-(2-pyridine-2-ylethoxy)-1H-indene-2-carboxylate isopropyl ester.

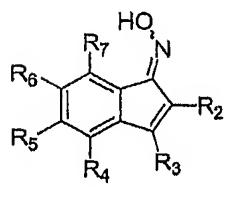
5

5. A process for preparing the indene derivative of claim 1, which comprises step of subjecting indenone compound of formula (II) to a condensation reaction with R_1NHOH or NH_2OH to obtain a compound of formula (III), and reacting the compound of formula (III) with R_1X :

10



(III)

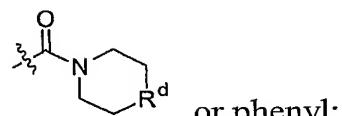


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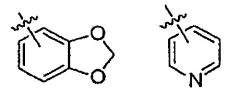
wherein,

X is halogen;

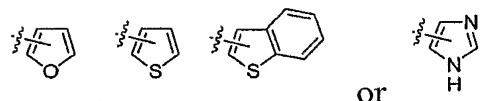
R_1 is C_{1-6} alkyl, C_{1-6} alkenyl or C_{3-6} cycloalkyl, which is unsubstituted or substituted with one or more phenyl groups;



R₂ is H, CN, CO₂R^a, CH₂CO₂R^a, CONR^bR^c, or phenyl;



R₃ is C₁₋₆ alkyl, C₃₋₆ cycloalkyl, or naphthyl, phenyl,



or

which is unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, CN, NH₂, NO₂, OR^a, phenoxy, C₁₋₆ alkyl and C₃₋₆ cycloalkyl; and

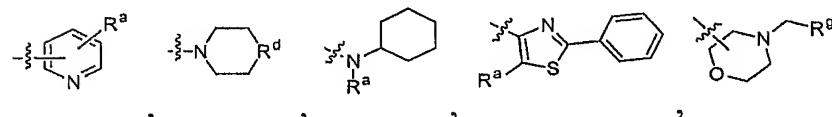
R₄, R₅, R₆ and R₇ are each independently H, OH, OSO₂CH₃, O(CH₂)_mR^e, CH₂R^f, OCOCH₂OR^g, OCH₂CH₂OR^g or OCH₂CH=CHR^g, or R₅ and R₆ together form OCH₂O;

in which R^a is H, or C₁₋₆ alkyl or C₃₋₆ cycloalkyl, which is unsubstituted or substituted with one or more halogens;

R^b and R^c are each independently H, C₁₋₆ alkyl or C₃₋₆ cycloalkyl;

R^d is O, S or NR^a;

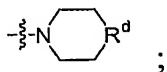
R^e is H, halogen, C₃₋₆ cycloalkyl, naphthyl,



or phenyl, which is

unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, CN, NH₂, NO₂, OR^a, CF₃ and COOR^a;

R^f is OCH₂CH₂R^g or

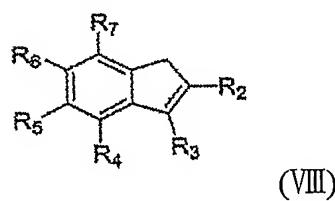
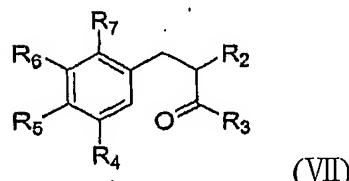
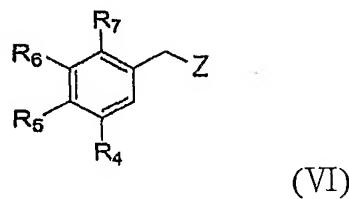
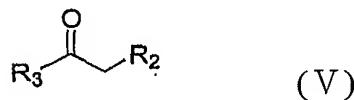


R^g is phenyl, which is unsubstituted or substituted with one or more substituents selected from the group consisting of halogen, CN, NH₂, NO₂ and OR^a; and

m is an integer in the range of 1 to 5.

6. The process of claim 5, wherein the indenone compound of formula (II) is prepared by a process comprising the steps of:

- 5 1) reacting compounds of formula (V) and (VI) to obtain a compound of formula (VII);
- 2) subjecting the compound of formula (VII) to cyclization to obtain a compound of formula (VIII); and
- 3) subjecting the compound of formula (VIII) to oxidation.

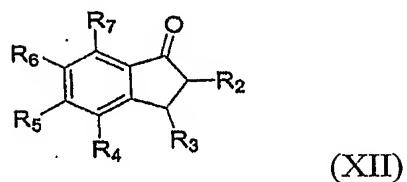
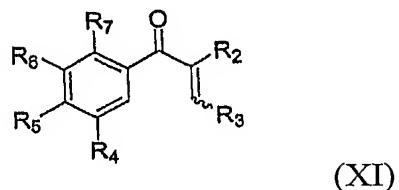
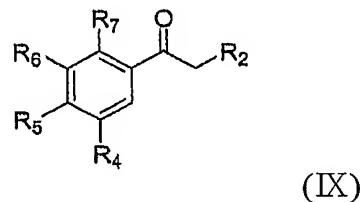


10 wherein,

15 R_2 to R_7 have the same meanings as defined in claim 5, and Z is halogen or activated leaving group.

7. The process of claim 5, wherein the indenone compound of formula (II) is prepared by a process comprising the steps of:

1) reacting compounds of formula (IX) and (X) to obtain a compound of formula (XI);
 2) subjecting the compound of formula (XI) to cyclization to obtain a compound of formula (XII); and
 5 3) subjecting the compound of formula (XII) to oxidation.

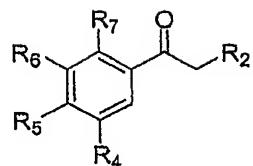


10 wherein,

R₂ to R₇ have the same meanings as defined in claim 5.

8. The process of claim 5, wherein the indenone compound of formula (II) is prepared by a process comprising the steps of:

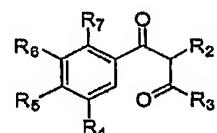
15 1) reacting compounds of formula (IX) and (XIII) to obtain a compound of formula (XIV); and
 2) subjecting the compound of formula (XIV) to cyclization.



(IX)



(XIII)



(XIV)

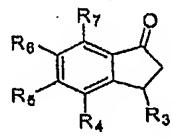
wherein,

5 R₂ to R₇ have the same meanings as defined in claim 5.

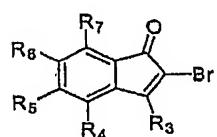
9. The process of claim 5, wherein the indenone compound of formula (II) is prepared by a process comprising the steps of:

10 1) subjecting a compound of formula (XV) to bromination obtain a compound of formula (XVI); and

2) subjecting the compound of formula (XVI) to a carbon-carbon coupling reaction in the presence of a metal catalyst, or to a substitution reaction using a nucleophile.



(XV)



(XVI)

15

wherein,

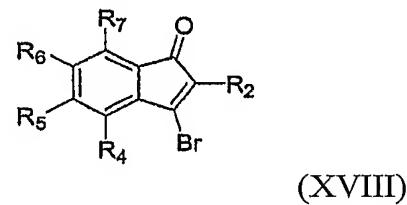
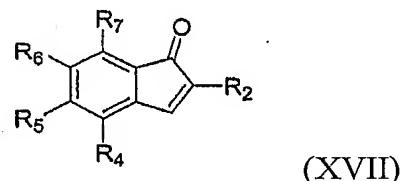
R_3 to R_7 have the same meanings as defined in claim 5.

10. The process of claim 5, wherein the indenone compound of formula (II) is prepared by a process comprising the steps of:

5 1) subjecting a compound of formula (XVII) to bromination obtain a compound of formula (XVIII); and

2) subjecting the compound of formula (XVIII) to a carbon-carbon coupling reaction in the presence of a metal catalyst, or to a substitution reaction using a nucleophile.

10



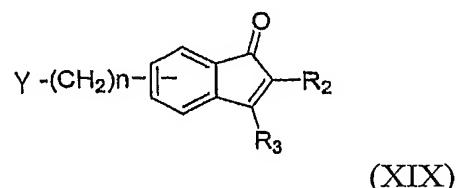
wherein,

R_2 and R_4 to R_7 have the same meanings as defined in claim 5.

15

11. The process of claim 5, wherein the indenone compound of formula (II) is prepared by subjecting a compound of formula (XIX) to an acylation reaction, a halogenation reaction followed by a substitution reaction by a nucleophile, or a carbon-carbon coupling reaction in the presence of a metal catalyst.

20



wherein,

R_2 and R_3 have the same meanings as defined in claim 5, Y is hydroxy, thiol, amino C_{1-6} alkyl or halogen, and n is an integer in the range of 0 to 5.

5 12. A pharmaceutical composition for modulating the activities of peroxisome proliferator activated receptors (PPARs) comprising a therapeutically effective amount of the compound or salt defined in claim 1 as an active ingredient together with a pharmaceutically acceptable carrier.

10 13. The composition of claim 12, which is used for the treatment and prevention of diabetes, obesity, arteriosclerosis, hyperlipidemia, hyperinsulinism, hypertension, osteoporosis, liver cirrhosis, asthma and cancer.